Operations & Asset Management

A Foundation Integration Model

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Background

- **ISO TC184/SC4 - Industrial Data**
  - Issues on interoperability of STEP Application Protocols (AP's)
  - Lack of interoperability between ISO10303, ISO13584, ISO15926, MANDATE
  - WG10 - Technical Architecture and Methodology
    - Preliminary Work Item on AP Modularisation
    - Preliminary Work Item - SC4 Data Architecture
      - To provide the capability for the different SC4 data standards to be used together, and with other non-SC4 data standards to exchange, integrate and share industrial data
        - A data integration environment

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A Data Integration Environment

- An integration data model able to support the different data requirements,
- A mapping methodology to define how data is migrated from one model to another,
- A consolidation methodology that defines how data sets are merged to eliminate duplicate information about the same object,
- Extensions to EXPRESS to support the development of a data model that crosses levels of abstraction,
- A low level data language capable of describing data and data models across different data modelling languages, i.e. languages in addition to EXPRESS.

This paper looks at the first of these

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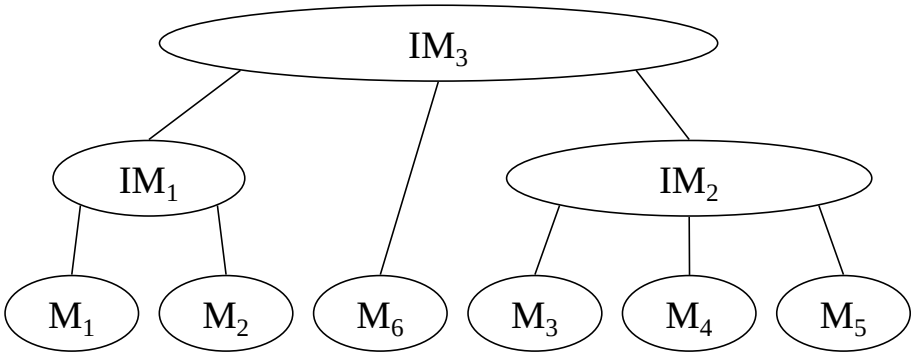
ANSI/SPARC and Data Model Integration



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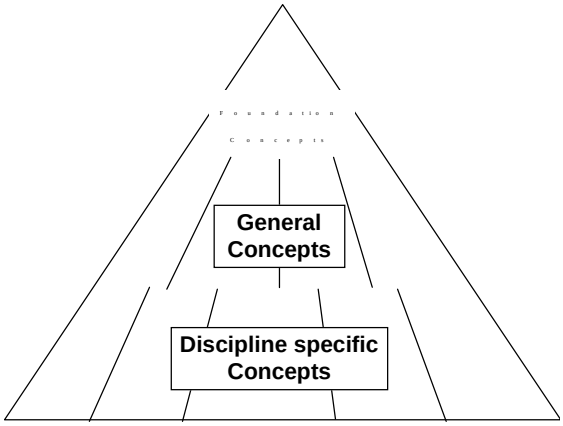
Base Concepts



Shell Services International
slide 5

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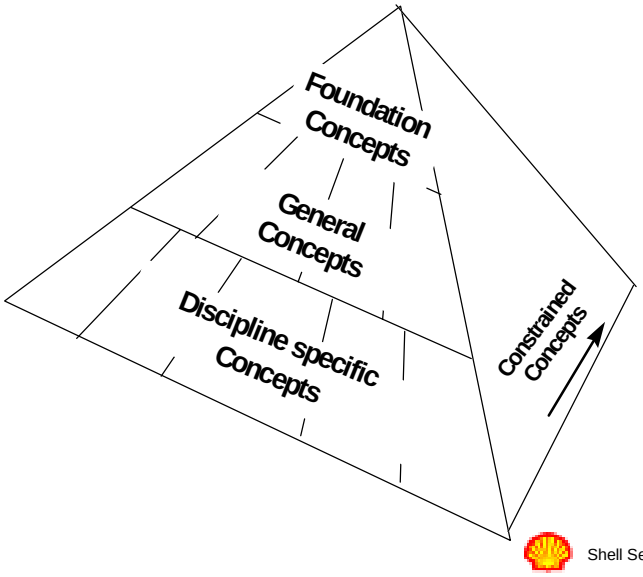
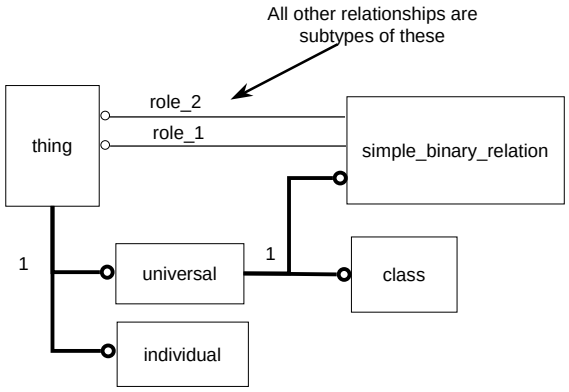
Full Integration Model

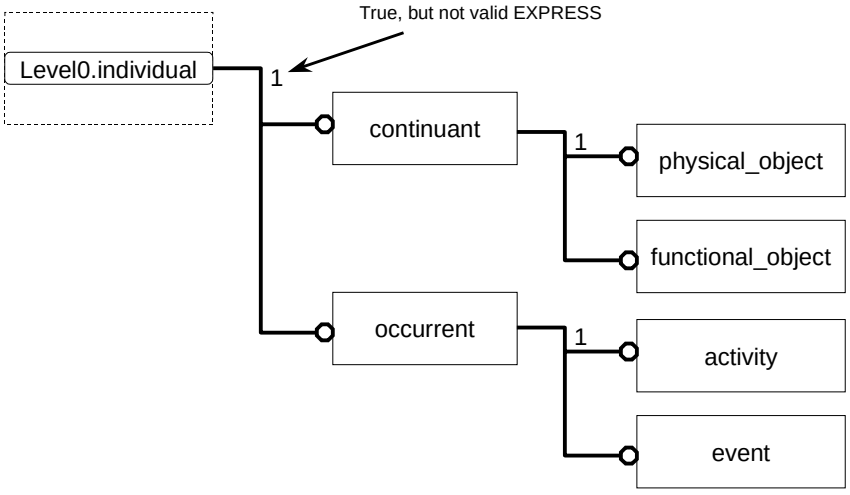


Shell Services International
slide 6

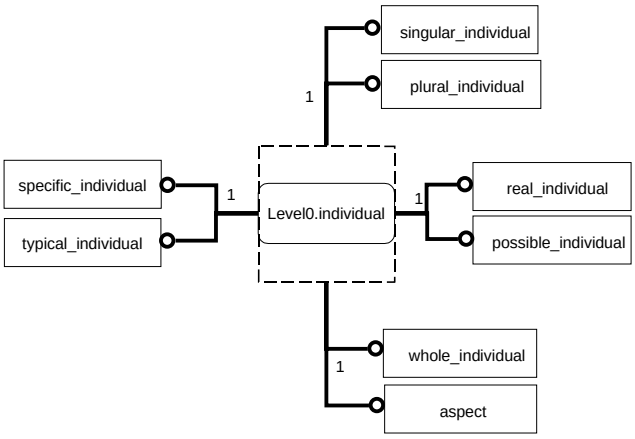
Formal Level



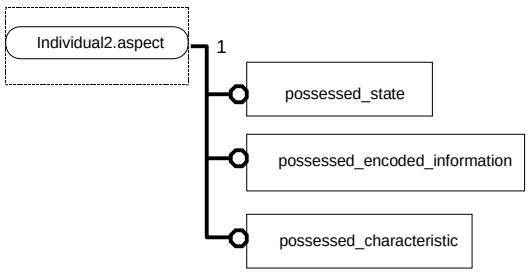
Individual 1



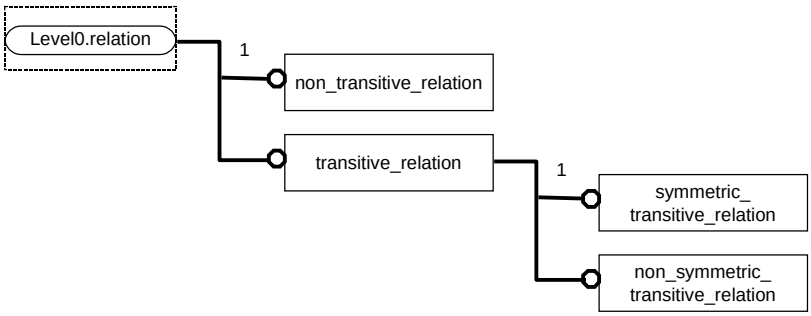
Individual - 2



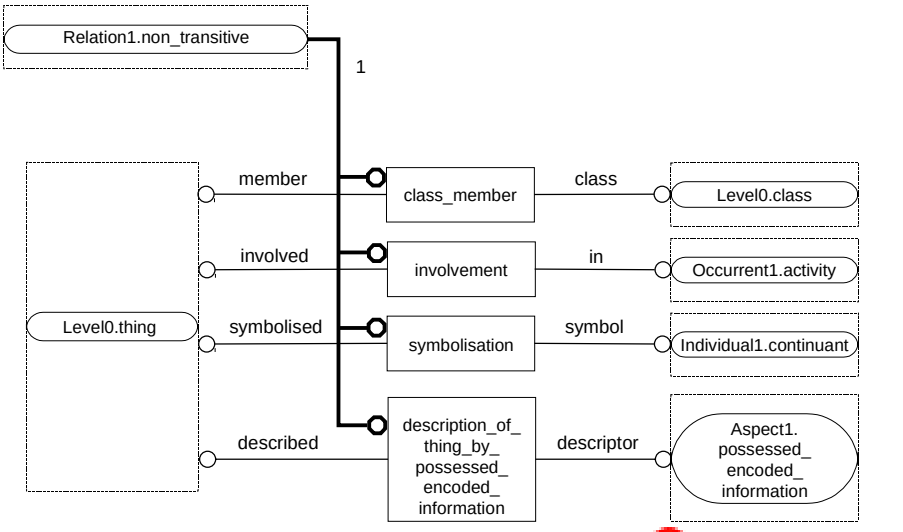
Aspect - 1



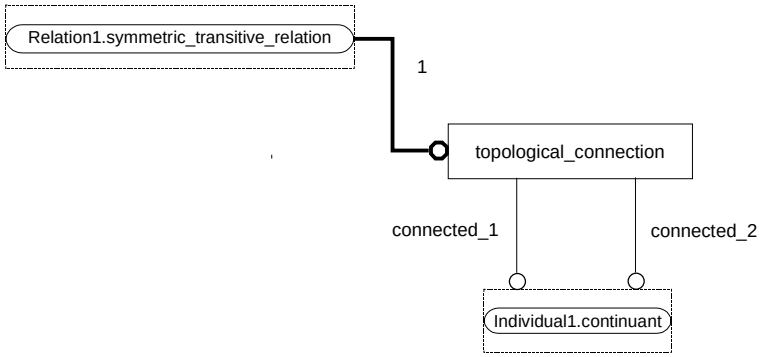
Relation - 1



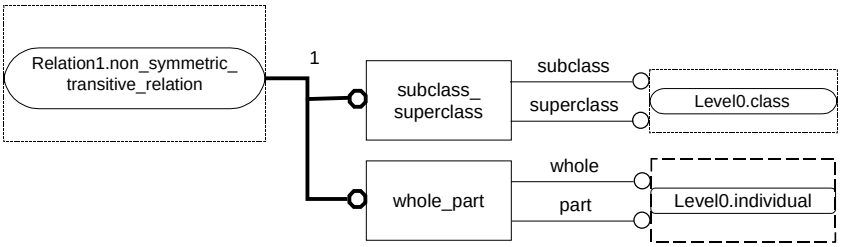
Non Transitive - 1



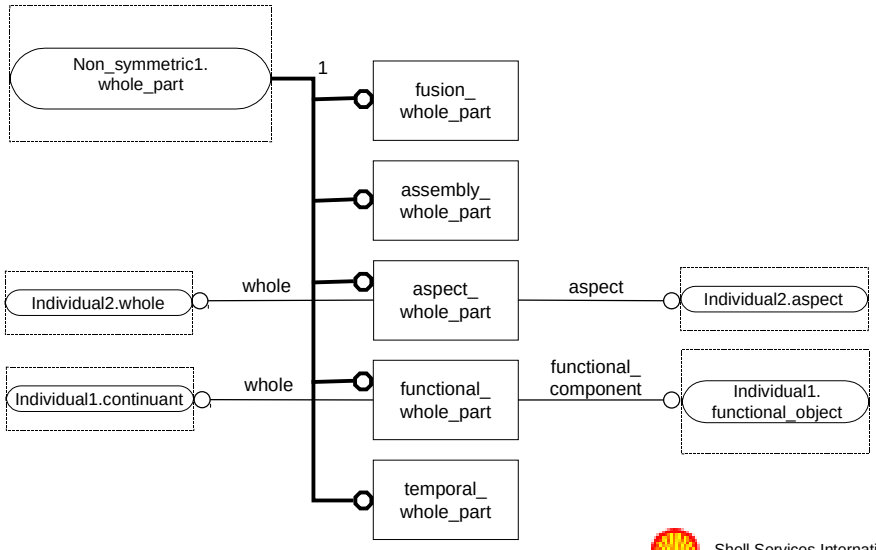
Symmetric - 1



Non Symmetric 1



Whole Part - 1



Conclusions & Next Steps

- **Conclusions**
  - A start has been made on developing a Foundation Integration model
  - A number of base concepts have been identified
- **Next Steps**
  - The model needs to be tested against a range of requirements
  - The model needs to be extended, and a methodology for extension developed
  - Other parts of the architecture need to be developed

Questions?